Traffic Control
## Traffic Control

### Two-Lane and Multi-Lane Roadways

<table>
<thead>
<tr>
<th>NO.</th>
<th>DATE</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-1</td>
<td>10-15-19</td>
<td>Work Not Affecting Traffic (Two-Lane or Multi-Lane)</td>
</tr>
<tr>
<td>TC-61</td>
<td>04-19-22</td>
<td>Two-Lane, Two-way Operation</td>
</tr>
<tr>
<td>TC-62</td>
<td>10-18-22</td>
<td>Permanent Two-Lane to Four-Lane Divided Transition</td>
</tr>
<tr>
<td>TC-63</td>
<td>10-16-18</td>
<td>Lane Closure at Two-Lane to Four-Lane Transition.</td>
</tr>
<tr>
<td>TC-64</td>
<td>10-16-18</td>
<td>Lane Closure at Two-Lane to Four-Lane Transition with Flagger</td>
</tr>
<tr>
<td>TC-81</td>
<td>10-15-19</td>
<td>Restricted Width Signing (Less Than 14.5 Feet)</td>
</tr>
</tbody>
</table>

### Two-Lane Roadways

<table>
<thead>
<tr>
<th>NO.</th>
<th>DATE</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-202</td>
<td>10-19-21</td>
<td>Work Within 15 ft of Traveled Way</td>
</tr>
<tr>
<td>TC-203</td>
<td>10-15-19</td>
<td>Aerial Seeding Operations</td>
</tr>
<tr>
<td>TC-211</td>
<td>10-15-19</td>
<td>Lane Closure on Low Volume Roadway</td>
</tr>
<tr>
<td>TC-212</td>
<td>04-21-20</td>
<td>Spot Location Lane Closure with Flaggers</td>
</tr>
<tr>
<td>TC-213</td>
<td>10-18-22</td>
<td>Lane Closure with Flaggers</td>
</tr>
<tr>
<td>TC-214</td>
<td>10-18-22</td>
<td>Lane Closure with Flaggers for use with Pilot Car</td>
</tr>
<tr>
<td>TC-215</td>
<td>10-15-19</td>
<td>Lane Closure with Signals (Up to Three Days)</td>
</tr>
<tr>
<td>TC-216</td>
<td>10-18-16</td>
<td>Lane Closure with Signals</td>
</tr>
<tr>
<td>TC-217</td>
<td>10-18-16</td>
<td>Lane Closure with Signals and TBR</td>
</tr>
<tr>
<td>TC-218</td>
<td>04-21-20</td>
<td>Lane Closure with Pilot Car and Flagger Operated Signals</td>
</tr>
<tr>
<td>TC-228</td>
<td>10-16-18</td>
<td>Lane Closure Involving TWLTL</td>
</tr>
<tr>
<td>TC-231</td>
<td>10-15-19</td>
<td>Slow Moving Vehicle Operating in the Traffic Lane</td>
</tr>
<tr>
<td>TC-232</td>
<td>10-21-14</td>
<td>Shoulder Rumble Strip Operations</td>
</tr>
<tr>
<td>TC-233</td>
<td>10-17-17</td>
<td>Pavement Marking Operations Two-Lane</td>
</tr>
<tr>
<td>TC-234</td>
<td>10-17-17</td>
<td>Strip Sealing Operations</td>
</tr>
<tr>
<td>TC-235</td>
<td>10-15-19</td>
<td>Edge Rut Repair</td>
</tr>
<tr>
<td>TC-251</td>
<td>10-15-19</td>
<td>Temporary Road Closure</td>
</tr>
<tr>
<td>TC-252</td>
<td>04-21-20</td>
<td>Routes Closed to Traffic</td>
</tr>
</tbody>
</table>
## Traffic Control

<table>
<thead>
<tr>
<th>NO.</th>
<th>DATE</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-253</td>
<td>10-19-21</td>
<td>Paved On-Site Detour</td>
</tr>
<tr>
<td>TC-271</td>
<td>10-18-16</td>
<td>Signalized Equipment Crossing</td>
</tr>
<tr>
<td>TC-272</td>
<td>10-18-16</td>
<td>Unsignalized Equipment Crossing</td>
</tr>
<tr>
<td>TC-273</td>
<td>10-15-19</td>
<td>Construction Site Entrance</td>
</tr>
<tr>
<td>TC-282</td>
<td>10-15-19</td>
<td>Uneven Lanes</td>
</tr>
<tr>
<td>TC-283</td>
<td>10-15-19</td>
<td>Surveying Operations</td>
</tr>
<tr>
<td>TC-284</td>
<td>10-15-19</td>
<td>No Centerline Markings on Non-Primary Roadways</td>
</tr>
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</table>

### Multi-Lane Roadways

<table>
<thead>
<tr>
<th>NO.</th>
<th>DATE</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-402</td>
<td>10-19-21</td>
<td>Work Within 15 ft of Traveled Way</td>
</tr>
<tr>
<td>TC-403</td>
<td>10-15-19</td>
<td>Aerial Seeding Operations</td>
</tr>
<tr>
<td>TC-415</td>
<td>04-19-22</td>
<td>Short Term Lane Closure with TMA</td>
</tr>
<tr>
<td>TC-416</td>
<td>10-15-19</td>
<td>Partial Lane Closure on Ramps</td>
</tr>
<tr>
<td>TC-417</td>
<td>04-21-20</td>
<td>Ramp Closure</td>
</tr>
<tr>
<td>TC-418</td>
<td>04-19-22</td>
<td>Lane Closure on Divided Highway</td>
</tr>
<tr>
<td>TC-419</td>
<td>10-16-18</td>
<td>Lane Closure on Undivided Highway</td>
</tr>
<tr>
<td>TC-420</td>
<td>10-16-18</td>
<td>Lane Closure at Ramps</td>
</tr>
<tr>
<td>TC-421</td>
<td>04-19-22</td>
<td>Lane Closure with TBR</td>
</tr>
<tr>
<td>TC-422</td>
<td>04-19-22</td>
<td>Closure of Two Adjacent Lanes on Divided Highway</td>
</tr>
<tr>
<td>TC-423</td>
<td>10-20-20</td>
<td>Closure of Two Adjacent Lanes on Undivided Highway</td>
</tr>
<tr>
<td>TC-429</td>
<td>10-16-18</td>
<td>Closure of Continuous Two-Way Left Turn Lane and Adjacent Lane</td>
</tr>
<tr>
<td>TC-431</td>
<td>10-18-22</td>
<td>Slow Moving Vehicle Operating in the Traffic Lane</td>
</tr>
<tr>
<td>TC-432</td>
<td>10-17-17</td>
<td>Shoulder Rumble Strip Operations</td>
</tr>
<tr>
<td>TC-433</td>
<td>10-17-17</td>
<td>Pavement Marking Operations</td>
</tr>
<tr>
<td>TC-435</td>
<td>10-18-22</td>
<td>Multi-Line Closure For Mobile Operation 50 mph or Greater</td>
</tr>
<tr>
<td>TC-451</td>
<td>04-21-15</td>
<td>Temporary Road Closure on Divided Highway</td>
</tr>
<tr>
<td>TC-454</td>
<td>10-17-17</td>
<td>Temporary Detour Using Ramps on Divided Highway</td>
</tr>
<tr>
<td>TC-482</td>
<td>04-19-22</td>
<td>Uneven Lanes</td>
</tr>
</tbody>
</table>
## Traffic Control

<table>
<thead>
<tr>
<th>NO.</th>
<th>DATE</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-601</td>
<td>10-15-19</td>
<td>Pedestrian Detour</td>
</tr>
<tr>
<td>TC-602</td>
<td>10-15-19</td>
<td>Sidewalk Diversion</td>
</tr>
</tbody>
</table>
Traffic Control
Possible Contract Item:

1. Slow-Moving Operation
   VEHICLE STOPPED ON SHOULDER FOR LESS THAN ONE HOUR

2. Slow-Moving Operation
   PICKUP
   1000' 48" x 48"
   W20-6
   SURVEY CREW
   ROAD WORK AHEAD
   W21-6 48" x 48"

Do not allow work to interfere with the flow of traffic.
When parked, locate vehicles as far from the open traffic lane as possible. Entrances and driveways should be used whenever appropriate.
Equip all vehicles with an amber revolving light or amber strobe light.

For work lasting longer than one hour, refer to TC-202 or TC-402.

LEGEND
Traffic Sign
Direction of Traffic

IOWA DOT
STANDARD ROAD PLAN
TC-1
REVISION 10-15-19
SHEET 1 of 1
APPROVED BY DESIGN METHODS ENGINEER
WORK NOT AFFECTING TRAFFIC
(TWO-LANE OR MULTI-LANE)
Possible Contract Item:
Traffic Control

LEGEND
- 42" Channelizer
- Traffic Sign
- Work Area
- Direction of Traffic

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>A</th>
<th>C</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 or less</td>
<td>100</td>
<td>40'</td>
<td>50'</td>
</tr>
<tr>
<td>30 - 35</td>
<td>250</td>
<td>40'</td>
<td>50'</td>
</tr>
<tr>
<td>40 - 50</td>
<td>300</td>
<td>40'</td>
<td>100'</td>
</tr>
<tr>
<td>55 or greater</td>
<td>1000</td>
<td>100'</td>
<td>100'</td>
</tr>
</tbody>
</table>

Device Spacing = C

A

Device Spacing = C

5 Devices

50'

TC-30
STANDARD ROAD PLAN

REVISION: 4  04-17-12

APPROVED BY DESIGN METHODS ENGINEER

CLOSURE OF CONTINUOUS TWO-WAY LEFT-TURN LANE
OVERVIEW OF Crossover

Place Two-Way Traffic symbol and DO NOT PASS signs alternately on both sides of the roadway at a maximum of one-half mile intervals for both directions of travel. Always have signs in sight of motorists.

When the Average Daily Traffic (ADT) exceeds 20,000 vehicles per day or when a traffic queue extends beyond the advanced signing, place RIGHT/LEFT LANE CLOSED 4 MILES and RIGHT/LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively, as appropriate.

Possible Contract Items:
- Painted Symbols and Legends
- Pavement Marking Items
- Pavement Marking Removed
- Safety Closures
- Temporary Floodlighting
- Temporary Lane Separator System
- Traffic Control

Possible Tabulations:
See sheet 4 for supplemental drawings.

1. Refer to SI-881 for sign details.
2. Refer to PM-111 for arrow details.
3. Space Speed Limit signs at one-mile intervals.
4. Install an additional supplemental plaque with the message NEXT X MILES on the Two-Way Traffic symbol sign assembly on the right side of the roadway to inform motorists of the remaining length of two-lane traffic. Round X to the nearest whole-mile increment.
5. Use a 4 foot wide Type III Barricade.
6. For roadways with a posted speed limit of 60 mph or greater before road work:
   - Place SPEED LIMIT AHEAD sign and SPEED LIMIT 55 sign prior to the lane closure as shown. Place SPEED LIMIT 65 or 70 beyond the work area as shown.
   - Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
   - Place Speed Feedback Sign at the end of the merge taper.
See sheet 4 for supplemental drawings.

1. Refer to SI-881 for sign details.
2. Refer to PM-111 for arrow details.
3. Space Speed Limit signs at one-mile intervals.
4. Install an additional supplemental plaque with the message NEXT X MILES on the Two-Way Traffic symbol sign assembly on the right side of the roadway to inform motorists of the remaining length of two-lane traffic. Round X to the nearest whole-mile increment.
5. For roadways with a posted speed limit of 60 mph or greater before road work:
   - Place SPEED LIMIT AHEAD sign and SPEED LIMIT 55 sign prior to the lane closure as shown. Place SPEED LIMIT 65 or 70 beyond the work area as shown.
   - Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
   - Place Speed Feedback Sign at the end of the merge taper.
LEGEND

Drum
42" Channelizer

Work Area
Direction of Traffic
Detour Pavement
Safety Closure
(Refer to TC-252)
Temporary Lane Separator System

Details shown herein are intended to provide additional information to the requirements shown on sheets 2 and 3.

SUPPLEMENTAL CROSSOVER DRAWINGS
LEGEND

- Traffic Sign
- 48" Channelizer
- Drum
- Channelizer Marker
- Tubular Marker
- Temporary Floodlighting
- Temporary Lane Separator System
- Work Area
- Detour Pavement
- Direction of Traffic
- Safety Closure

**REVISIONS:**
- Removed TBR and crash cushion.
- Refer to SI-881 for sign details.
- Add below R11-2 already included in Safety Closure.
- Place TLSS from start of ramp gore to end of temporary ramp crossover.
- Place TLSS from start of full-width decel lane to end of ramp gore.

**TWO-LANE, TWO WAY OPERATION**
Possible Contract Items:
- Pavement Marking Items
- Permanent Road Closure
- Delineators

Possible Tabulations: 102-4, 108-22

LEGEND
- Traffic Sign
- Type III Barricade
- Delineator
- Direction of Traffic

CROSS TO THE RIGHT

Place Type III barricades complying with Section 2B.67 of the MUTCD.

Place yellow warning signs with black legend and symbols.

Modified length of no passing zone on page 2. Change type III barricade to red on white.

APPROVED BY DESIGN METHODS ENGINEER
Refer to TC-419 for lane closure details.

For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.
For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.
Possible Contract Item:

1. Traffic Control

WHERE AN INTERCHANGE IS LOCATED AT THE LAST PUBLIC ROAD PRIOR TO AREA OF RESTRICTED WIDTH

WHERE AN AT-GRADE INTERSECTION IS LOCATED AT THE LAST PUBLIC ROAD PRIOR TO AREA OF RESTRICTED WIDTH

LEGEND

- Area of Restricted Width
- Traffic Sign
When a pavement edge drop-off exists, install a SHOULDER DROP-OFF sign.

No pavement edge drop-offs greater than pavement depth will be allowed during non-working hours.

Shoulder edge drop-offs shall be mitigated according to Article 1107.08.K2 of the Standard Specifications.

For work lasting less than one hour, refer to TC-1.

1. When the length of a pavement edge drop-off is 1000 feet or less, the temporary fillet requirement of Article 1107.08 of the Standard Specifications does not apply. Reduce channelizer spacing to 40 feet.

2. For work areas less than 200 feet long, use channelizers spaced at 20 foot centers or use a vehicle with an amber revolving light or amber strobe light.
Place AERIAL SEEDING signs along the mainline at a maximum spacing of 3 miles.

Refer to SI-881 for sign details.

Possible Contract Item:
Traffic Control

<table>
<thead>
<tr>
<th>SPEED LIMIT</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>250</td>
</tr>
<tr>
<td>45 - 48</td>
<td>350</td>
</tr>
<tr>
<td>50 or greater</td>
<td>500</td>
</tr>
</tbody>
</table>
Do not use this layout when ADT exceeds 2000 vehicles.

Locate this layout at least 2,500 feet from any other work site layout.

Full-depth openings during non-working hours will not be allowed. Temporary plating, planking or filling may be necessary. Vehicles, unattended equipment, materials or stock-piled waste are not permitted between the shoulder lines during non-working hours.

For bridge deck overlay projects: The night before overlay operations begin, a bridge deck finishing machine and necessary materials may be placed on the roadway.

Do not use this layout if a No Passing Zone for the closed lane is located within this area.

Possible Contract Item:
Traffic Control

LEGEND
- Type 'A' Warning Light
- Traffic Sign
- Work Area
- Direction of Traffic
- 42" Channelizer
Use only during daylight hours. Typical applications include:
- Pavement repair
- Guardrail connections at bridge
- Secondary road intersections with primary road
- Sewing for full depth patch
- Joint sealing
- PR joints
- Surface patching
- Crack sealing
- No parking on opposite shoulder within 500 feet of work area.

Ensure traffic in the open lane flows freely. Stop the first vehicle in the closed lane from the position shown, then cross the traffic lane to stop other vehicles.

A vehicle with an amber revolving light or amber strobe light may be substituted for the Type III barricade.

Provide a second flagger if:
- The flagger's view of approaching traffic in the open lane is less than 2 miles or the work site is in an area of restricted sight distance, such as a No Passing zone, or
- Excessive traffic delays are encountered.

F and G distances are to remain as near minimum values as work permits. However, to be able to move the work area without moving the advance signing, F and G distances may be varied within the limits of the table. Maximum movement can be achieved by setting one F or G value at the minimum and the other value at its maximum.

Possible Contract Items:
- Traffic Sign
- Flagger
- Work Area
- Type III Barricade
- Direction of Traffic

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>A</th>
<th>F and G Range</th>
<th>F + G Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>250</td>
<td>250'-350'</td>
<td>3500'</td>
</tr>
<tr>
<td>40 - 45</td>
<td>350</td>
<td>350'-3350'</td>
<td>3700'</td>
</tr>
<tr>
<td>50 or greater</td>
<td>500</td>
<td>500'-3500'</td>
<td>4000'</td>
</tr>
</tbody>
</table>

NOTE: DO NOT USE ON PRIMARY ROADWAYS.
Advance signing for optional use of portable rumble strips

- Keep F and G distances as near to minimum values as work permits. However, to allow advancement of the work area without moving signs, F and G distances may be varied within the limits of the table. Maximum movement can be achieved by setting one F or G value at the minimum and the other value at its maximum.

- If length of work area exceeds 1/4 mile, use TC-214.

Possible Contract items:
- Flaggers
- Traffic Control

LEGEND
- Traffic Sign
- Flagger
- 42" Channelizer
- Work Area
- Direction of Traffic
- Portable rumble strips
**Legend**

- Traffic Sign
- Flagger
- 42" Channelizer
- Work Area
- Direction of Traffic
- Portable Rumble Strip Panel

**Possible Contract Items:**
- Flagger
- Pilot Car
- Traffic Control

**Advance signing when portable rumble strips are not used**

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>ADT</th>
<th>A</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>H max.</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>up to 2,500</td>
<td>250'</td>
<td>49</td>
<td>0-20'</td>
<td>500'</td>
<td>2.5 mi.</td>
<td>50'</td>
</tr>
<tr>
<td></td>
<td>2,500 - 5,000</td>
<td>250'</td>
<td>49</td>
<td>0-20'</td>
<td>700'</td>
<td>2.0 mi.</td>
<td>50'</td>
</tr>
<tr>
<td></td>
<td>more than 5,000</td>
<td>500'</td>
<td>49</td>
<td>0-20'</td>
<td>1000'</td>
<td>1.5 mi.</td>
<td>50'</td>
</tr>
<tr>
<td>40 - 45</td>
<td>up to 2,500</td>
<td>350'</td>
<td>89</td>
<td>0-20'</td>
<td>700'</td>
<td>2.5 mi.</td>
<td>100'</td>
</tr>
<tr>
<td></td>
<td>2,500 - 5,000</td>
<td>350'</td>
<td>89</td>
<td>0-20'</td>
<td>700'</td>
<td>2.0 mi.</td>
<td>100'</td>
</tr>
<tr>
<td></td>
<td>more than 5,000</td>
<td>700'</td>
<td>89</td>
<td>0-20'</td>
<td>1400'</td>
<td>1.5 mi.</td>
<td>100'</td>
</tr>
<tr>
<td>50 or greater</td>
<td>up to 2,000</td>
<td>700'</td>
<td>160</td>
<td>200-300</td>
<td>1000'</td>
<td>2.5 mi.</td>
<td>100'</td>
</tr>
<tr>
<td></td>
<td>2,000 - 5,000</td>
<td>700'</td>
<td>160</td>
<td>200-300</td>
<td>1000'</td>
<td>2.0 mi.</td>
<td>100'</td>
</tr>
<tr>
<td></td>
<td>more than 5,000</td>
<td>1000'</td>
<td>160</td>
<td>200-300</td>
<td>2000'</td>
<td>1.5 mi.</td>
<td>100'</td>
</tr>
</tbody>
</table>

1. Sign optional for ADT less than 5,000.
2. In rural areas, as work activity nears the downstream limits of dimension H, the lane closure may be extended up to 1.0 mile beyond the maximum distance, H, shown in the table. After the traffic control devices have been placed to extend the closure and after work activity has progressed, the advanced signing and devices at the beginning of the traffic control zone should be moved downstream so that the H distance is once again within the limits shown in the table. This one-mile extension will not be allowed during any peak traffic hours listed in the contract documents.

3. Refer to SI-861 for sign details.
4. For traffic control zones lasting more than 2 hours, place temporary Portable Rumble Strip Panel.
This layout is for conditions lasting up to three calendar days. For situations lasting longer than three days, refer to TC-216.

1. For Temporary Traffic Signals, meet the requirements of Section 2528.03 of the Standard Specifications except for the following:
   - In lieu of a trailer or span-wire mounted system, signal heads may be located on the shoulders, one on each side of the roadway. Mount shoulder signal heads a minimum of 8 feet from the bottom of the signal head to the top of the ground surface.
   - 24-inch stop lines required during nighttime operation.

Possible Contract Items:
- Pavement Marking Items
- Pavement Marking Removal
- Temporary Traffic Signals
- Traffic Control

Possible Tabulations:
- 108-22
- 108-28

Possible Traffic Control Items:
- Temporary Traffic Signals
- Pavement Marking Items
- Pavement Marking Removal

---

**Legends**
- Vehicle Detection Area
- Temporary Traffic Signal
- Traffic Sign
- 42" Channelizer
- Work Area
- Direction of Traffic

**Timing for Actuated Signals**

<table>
<thead>
<tr>
<th>Recommended Settings (secs)</th>
<th>Distance Between Stop Lines</th>
<th>All Red (sec)</th>
<th>Distance Between Stop Lines</th>
<th>All Red (sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial = 12.0</td>
<td>450' 9 - 15</td>
<td>850' 19 - 33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extension = 2.5</td>
<td>500' 11 - 19</td>
<td>1050' 21 - 36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Green = 4.0</td>
<td>600' 13 - 22</td>
<td>1150' 23 - 39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow = 4.0</td>
<td>750' 15 - 20</td>
<td>1250' 25 - 43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Red = (see table)</td>
<td>850' 17 - 29</td>
<td>1350' 27 - 46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*All Red values based on operating speeds between 20 mph and 35 mph.*
**Temporary Traffic Signal**

- **Direction of Traffic**
  - Vehicle Detection Area
  - Flashing Warning Light
  - Type 'B' High-Intensity

**Pavement Marking Removal Limits**

- **1050'**
  - 20.4-35.7
- **18.5-32.3**

**Recommended Settings, secs.**

- **0'-50'**
  - Yellow = 5.0
- **0'-100'**
  - All

**Distance Between Stop Lines**

- **Initial = 12.0**
- **Extension = 2.5**
- **Maximum Green = 45.0**
- **Yellow = 5.0**
- **All Red** = (see table)

**Distance Between Stop Lines**

- **170'**
- **520 max.**
- **20' Device Spacing**

**Limit Speed (mph)**

- **35 or less**
  - 250'
  - 0'-50'
- **40 - 45**
  - 350'
  - 0'-100'
- **50 or greater**
  - 550'
  - 100'

**Possible Contract Items:**

- Pavement Marking Items
- Pavement Markings Removed
- Temporary Traffic Signals
- Traffic Control

**Pavement Marking Items**

- 48" x 64" x 64" W14-3
- 48" x 48" R4-1
- 48" x 24" G20-2A
- 48" x 48" W20-4
- 48" x 48" W20-4
- 36" x 48" R4-1
- 48" x 48" W3-3
- 48" x 48" W3-3
- 48" x 48" W3-3
- 48" x 48" W20-4

**Temporary Traffic Signals**

- DO NOT PASS
- Do not pass
- Lane road ahead
- Work zone
- Traffic sign
- Drum
- Drum
- Type 'B' high-intensity flashing warning light
- Work area
- Temporary traffic signal

**Legend**

- Vehicle detection area
- Traffic sign
- Drum
- Type 'B' high-intensity flashing warning light
- Work area
- Temporary traffic signal
- Direction of traffic

**Notes:**

- No drop-offs greater than pavement depth will be allowed during non-working hours.
- No vehicles, unattended equipment, materials or stock-piled waste are permitted between the shoulder lines during non-working hours.
- 20 Device Spacing

**Location:**

- Signal heads located 70 to 100 feet beyond stop bar. Adjust location of signal heads as field conditions warrant.
**LEGEND**

- Vehicle Detection Area (G20-2A, W20-1)
- Temporary Crash Cushion (W3-3, G20-2A)
- Temporary Traffic Signal (D1-8, W3-3)
- Drum (W3-3)
- Type 'B' High-Intensity Flashing Warning Light (W3-3)
- Work Area (W3-3)
- Temporary Traffic Signal (D1-8)

**TIMING FOR ACTUATED SIGNALS**

<table>
<thead>
<tr>
<th>Distance Between Stop Lines</th>
<th>All Red (sec.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100'</td>
<td>20.4-35.7</td>
</tr>
<tr>
<td>150'</td>
<td>18.5-32.3</td>
</tr>
<tr>
<td>200'</td>
<td>17.0-30</td>
</tr>
<tr>
<td>250'</td>
<td>15-27</td>
</tr>
<tr>
<td>300'</td>
<td>14-23</td>
</tr>
<tr>
<td>350'</td>
<td>12-20</td>
</tr>
</tbody>
</table>

*Range of values are based on operating speeds between 20 and 35 mph.*

**SPEED LIMIT**

<table>
<thead>
<tr>
<th>Speed Limit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>200'</td>
</tr>
<tr>
<td>40-45</td>
<td>300'</td>
</tr>
<tr>
<td>50 or greater</td>
<td>500'</td>
</tr>
</tbody>
</table>

**Pavement Marking Removal Limits**

- 250' max.
- 350' C/C

**Temporary Barrier Rail**

See Typical 8212

**Temporary Crash Cushion**

**Pavement Marking Items**

- Place Concrete Barrier Markers at 10 ft C/C on bridge rail.

**Temporary Traffic Signals**

- Locate signal heads 70 to 100 feet beyond stop bar. Adjust location of signal heads as field conditions warrant.

**Possible Tabulations:**

- Traffic Control
- Temporary Traffic Signals
- Temporary Barrier Rail
- Temporary Crash Cushions
- Pavement Marking Removal
- Pavement Marking Items
- Temporary Traffic Signals

**Possible Contract Items:**

- 108-22
- 108-28
- 108-30
- 108-33

**STANDARD ROAD PLAN**

TC-217

**LANE CLOSURE WITH SIGNALS AND TBR**

**APPROVED BY DESIGN METHODS ENGINEER**

**REVISION:**

10-18-16

**SHEET 1 of 1**

**REVISIONS:**

- Changed No Passing Zone sign size from 48" x 60" x 60" to 48" x 64" x 64".
LEGEND

- Flagger
- Temporary Traffic Signal
- Traffic Sign
- 42" Channelizer
- Work Area
- Direction of Traffic
- Portable Rumble Strip Panel

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>ADT</th>
<th>A</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 2,500</td>
<td>500</td>
<td>2.5 mi</td>
<td></td>
</tr>
<tr>
<td>2,500 - 5,000</td>
<td>500</td>
<td>2.0 mi</td>
<td></td>
</tr>
<tr>
<td>more than 5,000</td>
<td>1000</td>
<td>1.5 mi</td>
<td></td>
</tr>
</tbody>
</table>

No detection area required.

Timing for Push-button Actuated Signals

- Initial Green = 15 sec.
- Green Ext. = 2.5 sec.
- Yellow = 4.0 sec.

Install push-button actuated traffic signals. Program signals to rest in RED.

GREEN and GREEN EXTENSION only are initiated by flagger.

For Temporary Traffic Signals, meet the requirements of Section 2528.08 of the Standard Specifications except for the following:

- In lieu of a trailer or span-wire mounted system, signal heads may be located on the shoulders, one on each side of the roadway. Mount shoulder signal heads a minimum of 8 feet from the bottom of the signal head to the top of the ground surface.
- In lieu of a trailer or span-wire mounted system, signal heads may be located on the shoulders, one on each side of the roadway. Mount shoulder signal heads a minimum of 8 feet from the bottom of the signal head to the top of the ground surface.
- In lieu of a trailer or span-wire mounted system, signal heads may be located on the shoulders, one on each side of the roadway. Mount shoulder signal heads a minimum of 8 feet from the bottom of the signal head to the top of the ground surface.
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- In lieu of a trailer or span-wire mounted system, signal heads may be located on the shoulders, one on each side of the roadway. Mount shoulder signal heads a minimum of 8 feet from the bottom of the signal head to the top of the ground surface.

Possible Contract Items:
- Flagger
- Pilot Car
- Temporary Traffic Signal
- Traffic Control

Possible Tabulations:
- 108-27
- 108-28

2528.03 Portable Rumble Strip Panel.

For traffic control zones lasting more than 2 hours, place temporary Portable Rumble Strip Panel.
Possible Contract Item:
Traffic Control

1. Spacing = D for drums placed in tapers.
2. For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 100 feet.

LEGEND
- 42" Channelizer
- Drum
- Traffic Sign
- Work Area
- Direction of Traffic

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>A</th>
<th>C</th>
<th>D</th>
<th>S</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 or less</td>
<td>100</td>
<td>40</td>
<td>25°</td>
<td>120'</td>
<td>50'</td>
</tr>
<tr>
<td>30 - 35</td>
<td>250</td>
<td>40</td>
<td>30°</td>
<td>120'</td>
<td>50'</td>
</tr>
<tr>
<td>40 - 45</td>
<td>360</td>
<td>80</td>
<td>40°</td>
<td>280'</td>
<td>100'</td>
</tr>
<tr>
<td>50 or greater</td>
<td>500</td>
<td>100</td>
<td>55°</td>
<td>350'</td>
<td>100'</td>
</tr>
</tbody>
</table>
AREAS OF RESTRICTED SIGHT
(Typically a "No-Passing" Zone)

This layout is intended for use with slow-moving operations or with operations involving stops not to exceed 15 minutes. For stops exceeding 15 minutes or in heavy traffic situations, use TC-213.

Equip all vehicles with an amber revolving light or an amber strobe light.

When a stop is made in an area of restricted sight distance, use a flagger to hold traffic in the closed lane and allow traffic to pass when conditions are safe.

When a stop is made or work proceeds in an area where sight distance is restricted from either direction and is anticipated to be more than 5 minutes, a second flagger and ONE LANE ROAD AHEAD sign is required.

This vehicle and sign may be used in lieu of a flagger for Falling Weight Deflectometer tests.

Refer to SI-881 for sign details.
When fog sealing the milled rumble strips, place a 48" x 48" FRESH OIL sign (W21-2) at the beginning of the work area. Place additional FRESH OIL signs after each intersection and periodically through the work area so that signs are no more than 2 miles apart.

Operators should adjust their spacing, as necessary, to keep adjacent vehicles within view.

Equip all vehicles with an amber revolving light or amber strobe light.

Possible Contract Item:
Traffic Control
This layout may be used when painting edgeline or centerline markings. Equip all vehicles with an amber revolving light or amber strobe light.

1. Use this sign when painting centerline markings.
2. Optional Fluorescent Yellow Green (FYG) sign background may be used.
3. This arrow board may be operated in a four-corner caution mode.
4. Move this vehicle to the shoulder to accommodate passing traffic.
5. A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
6. Refer to SI-881 for sign details.
7. TMA required for speed limits of 55 mph or greater and ADT greater than 3,000.

Possible Contract Item: Traffic Control
Vehicles Straddling Centerline

1. Use this sign when painting centerline markings.
2. Optional Fluorescent Yellow Green (FYG) sign background may be used.
3. This arrow board may be operated in a four-corner caution mode.
4. Move this vehicle to the shoulder to accommodate passing traffic.
5. A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
6. Refer to SI-881 for sign details.
7. TMA required for speed limits of 55 mph or greater and ADT greater than 3,000.

Legend
- Direction of Traffic
- Truck-Mounted Attenuator (TMA)
**Traffic Control**

**Possible Contract Item:**

- **48" x 24"**
- **W1-6**
- **100'-300'**
- **200'-500'||**

**Shoulder line**

**Strobes**

**Flashers or Yellow**

- **Direction of Traffic**
- **Truck-Mounted Attenuator (TMA)**

**LEGEND**

- **VEHICLES NOT STRADDLING CENTERLINE**

Equip all vehicles with an amber revolving light or amber strobe light.

1. **Optional Fluorescent Yellow Green (FYG) sign background may be used.**
2. **This arrow display may be operated in a four-corner caution mode.**
3. **Move this vehicle to the shoulder to accommodate passing traffic.**
4. **A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.**
5. **Refer to SI-881 for sign details.**
6. **TMA required for speed limits of 55 mph or greater and ADT greater than 3,000.**

**SPEED LIMIT (mph) | A (min)**

| 25 or less | 200 |
| 30 - 35 | 300 |
| 40 - 45 | 500 |
| 50 or greater | 1000 |

**STRIP SEALING OPERATIONS**
Direction of Traffic
Truck-Mounted Attenuator (TMA)

LEGEND

SPEED LIMIT (mph) | A min
---|---
25 or less | 200′
30 - 35 | 300′
40 - 45 | 500′
50 or greater | 1000′

VEHICLES STRADDLING CENTERLINE

① Optional Fluorescent Yellow Green (FYG) sign background may be used.
② This arrow display may be operated in a four-corner caution mode.
③ Move this vehicle to the shoulder to accommodate passing traffic.
④ A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
⑤ Refer to SI-881 for sign details.
⑥ TMA required for speed limits of 55 mph or greater and ADT greater than 3,000.
**Areas of Restricted Sight**
(Typically a "No-Passing" Zone)

- **Limit Speed**: 25 mph or less
- **40-45 mph**: 30-35 ft
- **50+ mph**: 150'-1000'

**Areas of Unrestricted Sight**

**Legend**
- **Direction of Traffic**
- **Flagger**
- **Traffic Sign**
- **Work Area**
- **Work Vehicle**

<table>
<thead>
<tr>
<th>Speed Limit (mph)</th>
<th>A (min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 or less</td>
<td>200'</td>
</tr>
<tr>
<td>30-35</td>
<td>300'</td>
</tr>
<tr>
<td>40-45</td>
<td>500'</td>
</tr>
<tr>
<td>50 or greater</td>
<td>1000'</td>
</tr>
</tbody>
</table>

For stops exceeding 15 minutes or in heavy traffic situations, use TC-213.

Equip all vehicles with an amber revolving light or an amber strobe light.

- **When a stop is made in an area of restricted sight distance, use a flagger to hold traffic in the closed lane and allow to pass when conditions are safe.**
- **This vehicle and sign may be used in lieu of a flagger.**
- **Refer to SI-881 for sign details.**

**Equipment**
- **TC-213**
- **SI-881**

**Revisions**
- **10-15-19**
- New Logo

**APPROVED BY DESIGN METHODS ENGINEER**
This layout is intended for a preplanned closure of 20 minutes or less.

The Engineer will determine the storage length, B, necessary to accommodate stopped traffic during the closure.

### Possible Contract Item:
Traffic Control
Flaggers

### Table: Speed Limit and Storage Lengths

<table>
<thead>
<tr>
<th>Speed Limit (mph)</th>
<th>A (minimum)</th>
<th>B (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>250'</td>
<td>250'</td>
</tr>
<tr>
<td>40 - 45</td>
<td>350'</td>
<td>350'</td>
</tr>
<tr>
<td>50 or greater</td>
<td>500'</td>
<td>500'</td>
</tr>
</tbody>
</table>
SIGN PLACEMENT ON
TYPE III BARRICADES

Typical Sign Placement

ROAD CLOSED

Sign Placement with
Supplemental Sign

ROAD CLOSED

Possible Contract Items:
Traffic Control
Safety Closures
Portable Dynamic Message Sign

Possible Tabulation:
108-13A

REVISIONS:
Added Portable Dynamic Message Sign and new note 4 on Sheet 2.

APPROVED BY DESIGN METHODS ENGINEER

STANDARD ROAD PLAN
TC-252

REVISION: 6 04-21-20

SHEET 1 of 3

ROUTES CLOSED TO TRAFFIC
In situation 1, if the intersection is the point of detour these signs and barricades will become the responsibility of the contracting authority and may be modified by the contracting authority to fit detour signing.

2. When possible, a 100' buffer is desirable.

3. When L is less than 300 feet, omit the ROAD CLOSED AHEAD sign.

4. Place for 7 calendar days prior to closure. The Engineer will determine the message to display. Remove when road is closed. Use of Portable Dynamic Message Sign is optional on non-primary roadways.
During suspension of work, (such as over winter):

- Use Situation 2 on two-lane to four-lane projects
- Situation 5 is preferred where cross-traffic is maintained.

When the distance between the last public road intersection and the ROAD CLOSED or ROAD CLOSED TO THRU TRAFFIC barricade is less than 1,000 feet, omit the ROAD CLOSED 500 FT sign.

**SITUATION 2**
- Public cross-traffic maintained.
- No access to project.

**SITUATION 3**
- No access to project (Applicable to T-intersections)
- Public cross-traffic maintained.

**SITUATION 4**
- Public cross-traffic maintained.
- No access to project.

**SITUATION 5**
- Public cross-traffic maintained.
- Contractor and resident access only. (Applicable to T-intersections)
- No access to project
- Public cross-traffic maintained.

**SITUATION 6**
- Last public road intersection prior to closure
- ROAD CLOSED 500 FT

**SITUATION 7**
- Last public road intersection prior to closure
- ROAD CLOSED 500 FT
- ROAD CLOSED THRU TRAFFIC

**SITUATION 8**
- Last public road intersection prior to closure
- ROAD CLOSED 500 FT
- ROAD CLOSED THRU TRAFFIC

**SITUATION 9**
- Last public road intersection prior to closure
- ROAD CLOSED 500 FT
- ROAD CLOSED THRU TRAFFIC

**LEGEND**
- Traffic Sign
- Type III Barricade
- Work Area
- Road Closure

**Type III Barricade**

**Work Area**

**Road Closure**

**Location**

<table>
<thead>
<tr>
<th>Location</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>200'</td>
</tr>
<tr>
<td>Rural</td>
<td>500'</td>
</tr>
</tbody>
</table>
The Engineer may change the advisory speed. If reduced below 35 mph, the Reverse Curve signs (W1-4L and W1-4R) change to Reverse Turn signs (W1-3L and W1-3R).

Add below ROAD CLOSED (R11-2) sign already included in Safety Closure.

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>250'</td>
</tr>
<tr>
<td>40 - 45</td>
<td>350'</td>
</tr>
<tr>
<td>50 or greater</td>
<td>500'</td>
</tr>
</tbody>
</table>

Possible Contract Items:
- Pavement Marking Removal
- Pavement Marking Items
- Safety Closures
- Temporary Floodlighting
- Temporary Delineators
- Temporary Traffic Signal
- Traffic Control

Possible Tabulations:
- 108-13A
- 108-22
- 108-27
- 108-28

Design Information:
- Added Designer's Info button.

Approved by Design Methods Engineer.
**Recommended Settings, secs.**

<table>
<thead>
<tr>
<th>Distance Between Stop Lines</th>
<th>All Red (secs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>420</td>
<td>10</td>
</tr>
<tr>
<td>500</td>
<td>12</td>
</tr>
<tr>
<td>600</td>
<td>14</td>
</tr>
<tr>
<td>700</td>
<td>16</td>
</tr>
<tr>
<td>800</td>
<td>18</td>
</tr>
</tbody>
</table>

**SPEED LIMIT**

- 35 or less: 25 ft
- 40 - 45: 35 ft
- 50 or greater: 50 ft

**SPEED LIMITS**

- 35 or less
- 40 - 45
- 50 or greater

**Recommended Values**

- Range of values are based on an operating speed of 30 mph

**Pavement Marking Removal Limits**

- 20'
- 35' C/C
- 50' C/C

**Traffic Control Devices**

- Drum
- Type 'B' High-Intensity Flashing Warning Light
- Vehicle Detection Area

**Legend**

- Direction of Traffic
- Drum
- Single White Delineators (mount back to back)
- Road Closure
- Temporary Floodlighting
- Temporary Traffic Signal
- Traffic Sign
- Type 'B' High-Intensity Flashing Warning Light
- Vehicle Detection Area

**Timing for Actuated Signals**

- Initial = 12.0
- Extension = 2.5
- Maximum Green = 45.0
- Yellow = 3.0
- All Red = (see table)
Set signal timing as follows: For traffic from all directions, set the yellow indication at approximately 5 seconds and the all-red clearance interval at approximately 2 seconds. Set the minimum green interval on the main road at 20 seconds. Set the green interval for haul road traffic at 12 seconds but may be extended up to a maximum of 30 seconds.

### Possible Tabulations:
- Temporary Traffic Signals
- Temporary Floodlighting
- Traffic Control
- Pavement Marking Items
- Pavement Markings Removed

### Possible Contract Items:
- Type 'B' Warning Light
- Temporary Floodlighting
- Traffic Control
- Pavement Marking Items
- Pavement Markings Removed

### LEGEND
- Traffic Sign
- Type III Barricade
- Temporary Floodlighting
- Type 'B' Warning Light
- Temporary Traffic Signal
- Direction of Traffic

### SPEED LIMIT (mph)

<table>
<thead>
<tr>
<th>Category</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>250'</td>
</tr>
<tr>
<td>40 - 45</td>
<td>350'</td>
</tr>
<tr>
<td>50 or greater</td>
<td>500'</td>
</tr>
</tbody>
</table>

### Notes:
1. Locate the stop bars 70 feet in advance of each lane's nearest signal head.
2. Required only if haul road is used during nighttime hours.
3. When the equipment crossing is not in use, place Type III Barricades as shown, and cover SIGNAL AHEAD and STOP HERE ON RED signs.

**No detection area required.**
Possible Contract Items:
Traffic Control
Flaggers

During nighttime hours or when the haul road is not in use, Type III Barricades shall be placed as shown and DO NOT PASS, NO PASSING ZONE and Flagger Symbol signs shall be covered or removed.

### SPEED LIMIT (mph)
<table>
<thead>
<tr>
<th>Limit</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>200</td>
</tr>
<tr>
<td>40 - 45</td>
<td>350</td>
</tr>
<tr>
<td>50 or greater</td>
<td>500</td>
</tr>
</tbody>
</table>
Construction traffic shall yield the right-of-way to mainline traffic.

Refer to SI-881 for details.
LEGEND

Direction of Traffic

Traffic Sign

1. Shoulder Fillet: Refer to Section 1107 of the Standard Specifications and Safety Edge specifications.

2. Centerline fillet may be notched wedge, Safety Edge, or a temporary 3:1 HMA fillet.

Possible Contract Items:
- Pavement Marking Items
- Traffic Control

Possible Tabulation: 108-22

DESIGN LIFT THICKNESSES 2" OR LESS

DESIGN LIFT THICKNESSES GREATER THAN 2" (WITH θ FILLET)
*No-Passing* zones shall not exceed 2.5 miles for ADT less than 2500 vpd or 2.0 miles for ADT from 2500 to 5000 vpd.

1. Shoulder Fillet: Refer to Section 1107 of the Standard Specifications and Safety Edge specifications.
2. Typical 1:1 taper.
3. Spacing = 40 feet where horizontal curve radius is less than 1000 feet.
Possible Granular Shoulder Fillet

Pavement Marking

Possible Granular Shoulder Fillet

Pavement Markings

Possible Granular Shoulder Fillet

Pavement Markings

Shoulder Material

Pavement Markings

PAVEMENT MARKING SEQUENCE


2. Centerline filet may be notched wedge, Safety Edge, or a temporary 3:1 HMA filet.

LEGEND

- Surface Course
- Intermediate Course

EXISTING PAVEMENT

INITIAL PAVEMENT MARKINGS

SECOND PAVEMENT MARKING

THIRD PAVEMENT MARKINGS

FOURTH PAVEMENT MARKINGS

SHEET 3 of 3

UNEVEN LANES
Traffic Control
Flaggers
Possible Contract Items:
- Accommodate traffic.

When another person is required outside of the signing setup (e.g. for a survey target), a separate signing setup may be necessary unless the traffic lane can be vacated to accommodate traffic.

1. Keep F and G distances as near to minimum values as work permits. However, to be able to move the work area without moving the advance signing, F and G values may be varied within the limits of the table. Maximum movement can be achieved by setting one F or G value at the minimum and the other value at its maximum.

2. Use a second flagger if:
   - The flagger's view of approaching traffic in the open lane is less than a quarter mile or the work site is in an area of restricted sight distance (such as a "No-Passing" zone); or
   - Excessive traffic delays are encountered.

### Table: F and G Values

<table>
<thead>
<tr>
<th>Speed Limit (mph)</th>
<th>A</th>
<th>WITH LANE CLOSURE</th>
<th>WITHOUT LANE CLOSURE</th>
<th>F + G Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>250</td>
<td>250' - 3250'</td>
<td>500' - 3000'</td>
<td>3000</td>
</tr>
<tr>
<td>40 - 45</td>
<td>350</td>
<td>350' - 3900'</td>
<td>700' - 3000'</td>
<td>3700</td>
</tr>
<tr>
<td>50 or greater</td>
<td>500</td>
<td>500' - 3900'</td>
<td>1000' - 3000'</td>
<td>4000</td>
</tr>
</tbody>
</table>

### Legend
- Traffic Sign
- Instrument Person
- Cone
- Work Area
- Flagger
- Direction of Traffic
Possible Contract Item:
Traffic Control

1. Place "NO CENTERLINE" (W8-12) signs at intersections where the speed limit is 35 mph or greater.
2. Place additional "PASS WITH CARE" (R4-2) signs at the downstream end of No Passing Zones.
3. Place additional "NO CENTERLINE" (W8-12) signs at 2 mile intervals.

DO NOT USE ON PRIMARY ROADWAYS
When a pavement edge drop-off exists, install a SHOULDER DROP-OFF sign.

No pavement edge drop-offs greater than pavement depth will be allowed during non-working hours.

Shoulder edge drop-offs shall be mitigated according to Article 1107.08.K2 of the Standard Specifications.

For work lasting less than one hour, refer to TC-1.

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 or less</td>
<td>500</td>
<td>200</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>45 - 50</td>
<td>700</td>
<td>330</td>
<td>80</td>
<td>200</td>
</tr>
<tr>
<td>55 - 60</td>
<td>1000</td>
<td>500</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>65 - 70</td>
<td>1500</td>
<td>500</td>
<td>100</td>
<td>230</td>
</tr>
</tbody>
</table>

When the length of a pavement edge drop-off is 1000 feet or less, the temporary fill requirement of Article 1107.08 of the Standard Specifications does not apply. Reduce channelizer spacing to 40 feet.

For work areas less than 200 feet long, use channelizers spaced at 20 foot centers or use a vehicle with an amber revolving light or amber strobe light.
Limits of Day's Work

1. Place AERIAL SEEDING signs along the mainline at a maximum spacing of 3 miles.
2. Refer to SI-881 for sign details.

Possible Contract Item:
Traffic Control

SI-881 for sign details.

AERIAL SEEDING OPERATIONS
**Possible Contract Item:**
Traffic Control

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>A</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>M</th>
<th>T</th>
<th>A1</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>25'</td>
<td>48'</td>
<td>30</td>
<td>0-200'</td>
<td>245'</td>
<td>50'</td>
<td>250'</td>
<td>100'</td>
</tr>
<tr>
<td>40</td>
<td>500'</td>
<td>89'</td>
<td>40</td>
<td>0-300'</td>
<td>320'</td>
<td>50'</td>
<td>500'</td>
<td>100'</td>
</tr>
<tr>
<td>45</td>
<td>500'</td>
<td>89'</td>
<td>40</td>
<td>0-400'</td>
<td>630'</td>
<td>100'</td>
<td>100'</td>
<td>125'</td>
</tr>
<tr>
<td>50</td>
<td>700'</td>
<td>89'</td>
<td>40</td>
<td>0-500'</td>
<td>800'</td>
<td>100'</td>
<td>200'</td>
<td>175'</td>
</tr>
<tr>
<td>55 - 60</td>
<td>700'</td>
<td>100'</td>
<td>50</td>
<td>500'</td>
<td>630'</td>
<td>100'</td>
<td>200'</td>
<td>175'</td>
</tr>
<tr>
<td>65 - 70</td>
<td>1000'</td>
<td>100'</td>
<td>50</td>
<td>600'</td>
<td>770'</td>
<td>100'</td>
<td>200'</td>
<td>175'</td>
</tr>
</tbody>
</table>

1. Refer to SI-881 for sign details.
2. Equip all vehicles with an amber revolving light or amber strobe light.
3. This arrow board may be operated in a four-corner caution mode.
4. For roadways with a posted speed limit of 60 mph or greater before road work:
   - Place SPEED LIMIT 55 signs prior to the lane closure as shown.
   - Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
   - For traffic control zones lasting more than 4 hours, a Speed Feedback Sign may be placed at the end of the merge taper.

**Legend**
- **Direction Of Traffic**: Traffic Sign
- **Drum**: 42" Channelizer
- **Truck-Mounted Attenuator (TMA)**
- **Speed Feedback Sign**
- **Arrow Board**
- **Work Area**

**Short Term Lane Closure with TMA**

**Traffic Control**
Possible Contract Item:
Traffic Control

Refer to SI-881 for sign details.
Refer to SI-891 for sign details.
1 Refer to SI-881 for sign details.
 Refer to SI-881 for sign details.

Temporary EXIT sign, mounted so that bottom of sign is a minimum of 3 feet above pavement surface. If in place for more than one day, mount an Exit Number Panel with the proper exit number above the temporary EXIT sign.
Portion of Exit Ramp Closure

- **Type III Barricade**: Used for temporary traffic control.
- **Traffic Sign**: Indicates the presence of work ahead.
- **42" Channelizer**: Provides guidance for vehicles.
- **Direction of Traffic**: Arrows indicate the direction vehicles can go.
- **Work Area**: Represents the area designated for work.
- **Portable Dynamic Message Sign**: Displays messages to alert drivers.

**Possible Contract Items:**
- Safety Closure
- Traffic Control
- Portable Dynamic Message Sign

**Possible Tabulation:**
108-13A

**Notes:**
1. A vehicle with an amber revolving light or amber strobe light may be substituted for the Type III barricade.
2. Place Portable Dynamic Message Sign 3 calendar days prior to ramp closure. Leave in place until ramp is re-opened. The Engineer will determine the message to display.
EXIT RAMP CLOSURE

1. A vehicle with an amber revolving light or amber strobe light may be substituted for the Type III barricade.

2. Place Portable Dynamic Message Sign 3 calendar days prior to ramp closure. Leave in place until ramp is re-opened. The Engineer will determine the message to display.

LEGEND

- Type III Barricade
- Traffic Sign
- Drum
- 42" Channelizer
- Direction of Traffic
- Work Area
- Portable Dynamic Message Sign

TC-417 SHEET 2 of 3

APPROVED BY DESIGN METHODS ENGINEER
Place Portable Dynamic Message Sign 3 calendar days prior to ramp closure. Leave in place until ramp is re-opened. The Engineer will determine the message to display.

PRECEDING RAMP

RAMP CLOSURE

LEGEND

Road Closure
Traffic Sign
42" Channelizer
Direction of Traffic
Portable Dynamic Message Sign

EXIT CLOSSED

ES-2a
48" x 36"

500'

40' Device Spacing

Shoulder Width

1000' Typ.

Cover existing EXIT sign
Traffic Control
Possible Contract Item:

- 65 - 70 mph speed limit: 200 feet
- 90' to 500' spacing = C
- 100' to 500' spacing = D

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>A</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>M</th>
<th>T</th>
<th>A1</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>250</td>
<td>40</td>
<td>30</td>
<td>0-20'</td>
<td>240</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>40</td>
<td>700</td>
<td>80</td>
<td>40</td>
<td>0-300'</td>
<td>320</td>
<td>50</td>
<td>700</td>
</tr>
<tr>
<td>45</td>
<td>700</td>
<td>80</td>
<td>40</td>
<td>0-400'</td>
<td>330</td>
<td>100</td>
<td>700</td>
</tr>
<tr>
<td>50</td>
<td>700</td>
<td>80</td>
<td>46</td>
<td>400</td>
<td>330</td>
<td>100</td>
<td>700</td>
</tr>
<tr>
<td>55 - 60</td>
<td>1000</td>
<td>100</td>
<td>55</td>
<td>600</td>
<td>770</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>65 - 70</td>
<td>1000</td>
<td>100</td>
<td>60</td>
<td>700</td>
<td>910</td>
<td>100</td>
<td>200</td>
</tr>
</tbody>
</table>

Refer to SI-881 for sign details.

Where side road speed limit is 40 mph or less, a distance of 200 feet is allowed.

Place a ROAD WORK AHEAD sign on the opposite side of the intersection in a similar location.

For roadways with a posted speed limit of 60 mph or greater before road work:

- Place SPEED LIMIT 55 signs prior to the lane closure as shown.
- When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.
- Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
- For traffic control zones lasting more than 4 hours, place a Speed Feedback Sign at the end of the merge taper.
- For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums needed for full depth excavations spaced closer than 150 feet.

Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.
Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

1. Place arrow board within the closed lane behind the drums and as close to the beginning of the taper as practical.
2. Where side road speed limit is 40 mph or less, a distance of 200 feet is allowed.
3. Where there is no shoulder, place arrow board within the closed lane behind the drums and as close to the beginning of the taper as practical.
4. For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations, in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.

LEGEND

Traffic Sign
Drum
42” Channelizer
Arrow Board
Work Area
Direction of Traffic

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>A</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>M</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>250</td>
<td>42</td>
<td>36</td>
<td>0-200</td>
<td>240</td>
<td>50</td>
</tr>
<tr>
<td>40</td>
<td>500</td>
<td>80</td>
<td>40</td>
<td>0-300</td>
<td>320</td>
<td>60</td>
</tr>
<tr>
<td>45</td>
<td>700</td>
<td>80</td>
<td>40</td>
<td>0-400</td>
<td>320</td>
<td>60</td>
</tr>
<tr>
<td>50</td>
<td>700</td>
<td>80</td>
<td>40</td>
<td>400</td>
<td>320</td>
<td>60</td>
</tr>
<tr>
<td>55 - 80</td>
<td>1000</td>
<td>120</td>
<td>50</td>
<td>600</td>
<td>700</td>
<td>100</td>
</tr>
</tbody>
</table>

REVISIONS:
- Added circle note 4 and drums in the work area.

APPROVED BY DESIGN METHODS ENGINEER
For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.
### RIGHT LANE CLOSURE THROUGH EXIT RAMP

1. **Beginning of taper pavement**
2. **Taper pavement width = 12 feet**
3. **End of gore area**

### STAGING THROUGH EXIT RAMP

1. **Beginning of taper pavement**
2. **Taper pavement width = 12 feet**
3. **End of gore area**

---

**LEGEND**

- **X**: Drum
- ****: Traffic Sign
- **42° Channelizer**
- **←**: Direction of Traffic
- **Work Area**

---

**For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.**

**Temporary EXIT sign, mounted so that bottom of sign is a minimum of 3 feet above pavement surface. If in place for more than one day, mount an Exit Number Panel with the proper exit number above the temporary EXIT sign. See SI-881 for details.**

---

**IOWA DOT STANDARD ROAD PLAN**

**TC-420**

**SHEET 2 of 5**

**REVISIONS:**

- Added drums in work area and modified circle notes.
- Added Type III Barricade to Legend on Sheet 4.

**APPROVED BY DESIGN METHODS ENGINEER**
For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.
For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.
For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.

LEGEND
- Drum
- Traffic Sign
- 42" Channelizer

For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.

LANE CLOSURE AT EXIT RAMP
### Diagram Description

- **Legend**
  - **Traffic Sign**
  - **Drum**
  - **42" Channelizer**
  - **Speed Feedback Sign**
  - **Arrow Board**
  - **Temporary Crash Cushion**
  - **Work Area**
  - **Direction of Traffic**

- **Possible Tabulations**:
  - **Temporary Crash Cushions**
  - **Temporary Barrier Rail**
  - **Symbols and Legends Removed**
  - **Pavement Marking Removal Limits**
  - **Pavement Marking Items**
  - **Painted Symbols and Legends**

- **Possible Contract Items**:
  - 108-22
  - 108-29
  - 108-30
  - 108-33

### Instructions

1. **For roadways with a posted speed limit of 60 mph or greater before road work:**
   - Place **SPEED LIMIT AHEAD** sign and **SPEED LIMIT 55** sign prior to the lane closure as shown. Place **SPEED LIMIT 65 or 70** beyond the work area as shown.
   - For traffic control zones lasting more than 4 hours, place a **Speed Feedback Sign** at the end of the merge taper.

2. **Refer to SI-881 for sign details.**
   - For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.

3. For roadways with a posted speed limit of 60 mph or greater before road work:
   - **Tangent length of edge line**

---

**TC-421**

**STANDARD ROAD PLAN**

**LANE CLOSURE WITH TBR**
For roadways with a posted speed limit of 60 mph or greater before road work:

Place SPEED LIMIT AHEAD sign and SPEED LIMIT 55 sign prior to the lane closure as shown. Place SPEED LIMIT 65 or 70 beyond the work area as shown.

For traffic control zones lasting more than 4 hours, place a Speed Feedback Sign at the end of the merge taper.

Refer to SI-881 for sign details.

For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.

Temporary Crash Cushion

Direction of Traffic

Work Area
Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

Lanes with drop-offs greater than nominal 4 inches are not allowed during non-working hours.

1. Refer to SI-881 for sign details.
2. For roadways with a posted speed limit of 60 mph or greater before road work:
   - Place SPEED LIMIT 55 signs prior to the lane closure as shown.
   - When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.
   - Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
   - For traffic control zones lasting more than 4 hours, place a Speed Feedback Sign at the end of the merge taper.
3. For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.
For traffic control zones in place for 3 calendar days or less, place arrow boards, devices and signs as shown. For traffic control zones in place for 4 calendar days or more, also remove permanent pavement markings and place temporary pavement markings as shown.

When this layout is used during nighttime hours and the width of existing traffic lanes is 11 feet or less, use tubular markers to separate two-way two-lane traffic.

- Spacing = C for drums placed in tapers.
- For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.
- For work zones in place more than 3 calendar days, use TLSS. For work zones in place for 3 calendar days or less, 42” channelizers spaced at 40” c/c may be substituted for TLSS.
For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.
LEFT LANE CLOSURE

A/2 A

Law Enforcement Vehicle

W20-5 48" x 48"

B

Work Vehicle

200' Maximum

A

A2

B

LEFT LANE CLOSURE

Law Enforcement Vehicle (optional)

W20-5 48" x 48"

48" x 48" W20-5

RIGHT LANE CLOSURE

A/2 A

Law Enforcement Vehicle (optional)

W20-5 48" x 48"

B

Work Vehicle

200' Maximum

A

A2

B

SLOW MOVING VEHICLE OPERATING IN THE TRAFFIC LANE

EQUIP all vehicles with an amber revolving light or amber strobe light.

This layout is intended for use with slow-moving operations involving stops not to exceed 30 minutes. For stops exceeding 30 minutes, use TC-419 or TC-418.

1. TMA required for speeds limits of 45 mph or greater.
2. Optional Fluorescent yellow green (FYG) sign background may be used.
3. Optional vehicle

LEGEND

COCK

Arrow Board

C

Direction of Traffic

Work Area

SPEED LIMIT (mph)  Vehicle Spacing  Roll Ahead Distance (R)

< 25 25'-40' 25'-40' 100' 100' 75' 100'

25-40 50' 50' 125' 100' 100' 100' 150'

45 500' 250' 125' 175' 150' 100' 150'

50 or greater 1000' 500' 200' 240' 160' 200'

TC-431 SHEET 1 of 1

IOWA DOT

STANDARD ROAD PLAN

REVISION 10-18-22

APPROVED BY DESIGN METHODS ENGINEER
Equip all vehicles with an amber revolving light or amber strobe light.

When fog sealing the milled rumble strips, place a 48" x 48" FRESH OIL sign (W21-2) at the beginning of the work area. Place additional FRESH OIL signs after each intersection and periodically through the work area so that signs are no more than 2 miles apart.

Operators should adjust their spacing, as necessary, to keep adjacent vehicles within view.

TMA required for speed limits of 55 mph or greater.
Equipping all vehicles with an amber revolving light or amber strobe light.

1. Optional Fluorescent Yellow Green (FYG) sign background may be used.
2. This arrow board may be operated in a four-corner caution mode.
3. A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
4. Refer to SI-881 for sign details.
5. TMA required for speed limits of 55 mph or greater.
**LEGEND**

- **Direction of Traffic**
- **Truck-Mounted Attenuator (TMA)**

**INSIDE EDGELINE OR LANE LINE - DIVIDED**

1. Optional Fluorescent Yellow Green (FYG) sign background may be used.
2. This arrow board may be operated in a four-corner caution mode.
3. A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
4. Refer to SI-881 for sign details.
5. TMA required for speed limits of 55 mph or greater.
**LEGEND**
- Direction of Traffic
- Truck-Mounted Attenuator (TMA)

**CENTERLINE - UNDIVIDED ONLY**

1. Optional Fluorescent Yellow Green (FYG) sign background may be used.
2. This arrow board may be operated in a four-corner caution mode.
3. Refer to SI-881 for sign details.
4. TMA required for speed limits of 55 mph or greater.
For lane closures longer than one hour at a location, use TC-422.

On roadways with 3 lanes in each direction, close the left lane and the center lane to avoid conflicts with right side ramps. Lane closure pairings should be adjusted to fit site conditions.

On roadways with four lanes in each direction, close the left and left center lanes together and the right and right center lanes together.

Consider ramps closures when closing lanes adjacent to ramps.

1. Arrow boards are optional
2. Shadow vehicle 1 may be omitted when the shoulder is too narrow to drive on
3. Arrow board optional unless shadow vehicle 1 is omitted
4. Arrow board optional unless shadow vehicle 4 is omitted
5. Channelizing devices may be omitted for stops not exceeding 15 minutes
6. Truck-mounted or mini PDMS may be used in lieu of a full-sized PDMS
7. Audible warning system recommended
8. Audible warning system recommended if optional shadow vehicles 2 and 4 are omitted

LEGEND
- Arrow Board
- Truck-Mounted Attenuator (TMA)
- 42” Channelizer
- Direction of Traffic
- Work Area
- Portable Dynamic Message Sign

SPEED LIMIT (mph) Roll Ahead Distance (R)
<table>
<thead>
<tr>
<th>9000 to 22,000 lbs. GVW</th>
<th>Over 22,000 lbs. GVW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary Moving 15 mph Max</td>
<td>Stationary Moving 15 mph Max</td>
</tr>
<tr>
<td>50 or greater 200' 240' 160' 200'</td>
<td></td>
</tr>
</tbody>
</table>

TC-435
STANDARD ROAD PLAN
TC-435
MULTI-LANE CLOSURE FOR MOBILE OPERATION
50 mph or greater

APPROVED BY DESIGN METHODS ENGINEER
### Possible Contract Item:

Traffic Control

#### Standard Road Plan

**NEW**

TC-435

**SHEET 2 of 2**

**STANDARD ROAD PLAN**

FOR MOBILE OPERATION

45 mph or less

---

**LEGEND**

- **A** Arrow Board
- **B** Truck-Mounted Attenuator (TMA)
- **C** 42" Channelizer
- **D** Direction of Traffic
- **E** Work Area
- **F** Portable Dynamic Message Sign

#### Lane Closures

- **2 LEFT LANES CLOSED**

#### Roll Ahead Distance (R)

<table>
<thead>
<tr>
<th>SPEED LIMIT (mph)</th>
<th>Vehicle Spacing A</th>
<th>Rollover A to 22,000 lbs. GVW</th>
<th>Rollover Over 22,000 lbs. GVW</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-40</td>
<td>250'</td>
<td>100'</td>
<td>75'</td>
</tr>
<tr>
<td>45</td>
<td>500'</td>
<td>125'</td>
<td>100'</td>
</tr>
</tbody>
</table>

**LEGEND**

- **1** Arrow boards are optional
- **2** Shadow vehicle 1 may be omitted when the shoulder is too narrow to drive on
- **3** Channelizing devices may be omitted for stops not exceeding 15 minutes
- **4** Truck-mounted or mini PDMS may be used in lieu of a full-sized PDMS
- **5** TMA are optional for speeds of 30 mph or less

---

For lane closures longer than one hour at a location, use TC-422.

On roadways with 3 lanes in each direction, close the left lane and the center lane to avoid conflicts with right side ramps. Lane closure pairings should be adjusted to fit site conditions.

On roadways with four lanes in each direction, close the left and left center lanes together and the right and right center lanes together.

---

**APPROVED BY DESIGN METHODS ENGINEER**

**REVISION 10-18-22**
This layout is intended for a preplanned closure of 20 minutes or less.

1. A vehicle with an amber revolving light or amber strobe light may be substituted for leading law enforcement vehicle.
2. This distance may be increased to provide adequate storage for stopped vehicles.
3. Optional for speed limits less than 55 mph.

Possible Contract Items:
- Flaggers
- Portable Dynamic Message Sign
- Traffic Control

- Portable Dynamic Message Sign
- Road Work Ahead
- Be Prepared to Stop
- Road Work Ahead
- Traffic Sign
- Law Enforcement Vehicle
- Flagger
- Work Area
- Direction of Traffic

### SPEED LIMIT (mph)

<table>
<thead>
<tr>
<th>Speed Limit</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 or less</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>40 - 45</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>50 or greater</td>
<td>1000</td>
<td>2500</td>
</tr>
</tbody>
</table>
Possible Contract Items:
- Drum
- Work Area
- Flagger
- Arrow Board
- 42" Channelizer
- Law Enforcement Vehicle
- Traffic Sign

**LEGEND**
- Drum
- Traffic Sign
- 42" Channelizer
- Arrow Board
- Flagger
- Work Area
- Direction of Traffic

**SPEED LIMIT (mph)**

<table>
<thead>
<tr>
<th>M</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 - 60</td>
<td>50'</td>
</tr>
<tr>
<td>65 - 70</td>
<td>55'</td>
</tr>
</tbody>
</table>

**Spacing = 40'**

**Spacing = 60'**

**Beginning of taper pavement**

**Cover existing EXIT sign**

**End of gore area**

**Give priority to mainline traffic on the ramp.**

**Stop side road traffic before mainline traffic is rerouted onto ramp.**

1. For ADT less than 2000, a Contractor vehicle may be substituted for the Enforcement vehicle.

2. Refer to SI-881 for sign details.

**TC-454**

**STANDARD ROAD PLAN**

**REVISION:** 7  10-17-17

**APPROVED BY DESIGN METHODS ENGINEER**

**DESIGNER INFORMATION**

**REVISIONS:**
- Added Designer Info button and updated DOT logo.

**TOTAL RAMP ON DIVIDED HIGHWAY**

**TEMPORARY DETOUR USING**

**RAMP ON DIVIDED HIGHWAY**
Possible Contract Items:
- Pavement Marking Items
- Traffic Control

Possible Tabulation:
108-22

Refer to SI-881 for sign details.
**Legend**

- Surface Course
- Intermediate Course

**Notes**

1. Shoulder Fillet: Refer to Section TC-107 of the Standard Specifications and Safety Edge specifications.
2. Centerline fillet may be notched wedge, Safety Edge, or a temporary 3:1 HMA fillet.
Possible Tabulation:

113-2

Possible Contract Item:
Traffic Control

LEGEND

Roadway
Sidewalk
Sign
Pedestrian Path Closure
Work Area

MID-BLOCK CLOSURE

REVISION
10-15-19
REVISIONS:
New logo.

APPROVED BY DESIGN METHODS ENGINEER

PEDESTRIAN DETOUR
Acceptable materials and construction method for Pedestrian Channelizer will be defined in the contract documents. When Temporary Barrier Rail is specified as the Pedestrian Channelizer, Section 2528 of the Standard Specifications applies. For other types of Pedestrian Channelizers, the length of Pedestrian Channelizer installed will be measured in feet. Payment will be at the contract price per linear foot.

Possible Contract Items:
- Pedestrian Channelizer
- Temporary Barrier Rail
- Maintenance of Pedestrian Traffic

Possible Tabulation:

113-3